

CLIMATOLOGICAL DATA FOR SEPTEMBER, 1911.

DISTRICT No. 5. UPPER MISSISSIPPI VALLEY.

GEORGE M. CHAPPEL, District Editor.

GENERAL SUMMARY.

September, 1911, was noted for the number and severity of local thunder, hail, and wind storms; the excessive amount of rainfall over portions of the district; the general deficiency of sunshine; and the number of rainy days. The temperature for the district, as a whole, was near normal, and no unusually high or low readings were recorded. The month opened warm and the highest temperatures for the several States were recorded on the 1st or 2d. After the 2d the weather was moderate, with the coldest days between the 24th and 28th. Light frost occurred on one or more days as far south as northern Iowa and northern Illinois, and killing frosts with freezing temperatures occurred in the extreme northern part of the district on the 12th, 19th, 24th, 25th, 26th, 27th, and 28th, the lowest temperature reported being 18° on the 28th at Deerskin Dam, Wis. Rain fell in some part of the district on every day of the month, and was well distributed throughout the month in all sections. The average precipitation for Iowa was greater than for any September since the establishment of the Climatological Service, and in Illinois it was not only the record amount for September, but the greatest State average ever recorded in any month of any year. Daily amounts in excess of 4 inches were recorded at several stations in Iowa, Missouri, Indiana, and Illinois.

During the first half of the month the moisture and heat were generally favorable for reviving the pastures, putting the soil in condition for plowing and seeding of fall grains and replenishing the water supply, but by the close of the month the continued excessive moisture was injurious. In the southern sections plowing and seeding were delayed and corn in shock or on the ground was sprouting, small streams were out of their banks and much of the bottom land was flooded, and harvesting and thrashing were delayed in the extreme northern sections. Thunder, hail, and wind storms were frequent, and in many localities were very damaging.

TEMPERATURE.

The temperature was below the normal in the northern and above in the southern sections of the district, the departures ranging from +3.1° in Missouri to -2.9° in South Dakota, yet there were no unusually high or low readings recorded in any part of the district. With the exception of moderately high temperatures between the 1st and 3d and 14th and 16th, and comparatively low readings between the 24th and 30th, the fluctuations in temperature were slight. The 1st and 2d were the warmest days in all sections, and in southern Iowa and northwestern Missouri the maximum readings were up to or exceeded 100° at one or more stations on the 1st or 2d.

Killing frost and freezing temperatures occurred on several dates in the northern part of the district, but in North Dakota the minimum temperatures did not run as low as during the preceding month.

The monthly mean temperature for the district, as shown by the records of 294 stations, is 62.1°, which is 0.9° above the normal. The highest monthly mean was 77.6°, at Carbondale, Ill., and the lowest, 50.1°, at Warroad, Minn. The highest temperature reported was 105° at Steffenville, Mo., on the 2d, and the lowest 18°, at Deerskin Dam, Wis., on the 28th. The monthly mean and departure from the normal for the respective States in the district were as follows: North Dakota, 54.0°, -2.5°; Minnesota, 57.0°, -1.1°; South Dakota, 57.9°, -2.9°; Wisconsin, 58.7°, -1.2°; Iowa, 65.3°, +1.6°; Missouri, 61.9°, +3.1°; Indiana, 65.4°, +1.9°; Illinois, 68.8°, +2.3°.

PRECIPITATION.

The rainfall was above the normal in all parts of the district, and over portions of Iowa, Missouri, Indiana, and Illinois it was abnormally heavy; the average amounts and departures from the normal for the several States, or parts of States, in the upper Mississippi Valley being as follows: North Dakota, 2.44 inches, +0.71; Minnesota, 3.23, +0.50; South Dakota, 3.19, +1.40; Wisconsin, 5.29, +2.35; Iowa, 5.97, +2.58; Missouri, 10.16, +6.83; Indiana, 5.72, +2.94; Illinois, 9.10, +5.39.

Rains began in North Dakota on the 1st, and continued at frequent intervals over the entire district during the remainder of the month. Many of the showers were attended by severe thunder, hail, and wind storms, which did considerable damage to property. Stormy periods were from 4th-8th, 13th-14th, 17th-18th, and from 25th-30th, and local showers occurred on numerous other dates. The rainfall was abnormally heavy over southeastern Iowa, northeastern Missouri, and central Illinois; the average for Iowa and Illinois exceeded all previous records for September, and the monthly amount at several stations exceeded the record for any month of any year. There were 8 stations in Iowa, 4 in Missouri, and 28 in Illinois that reported monthly amounts in excess of 10 inches, the greatest being 20.03 inches at Monmouth, Ill. The area of rainfall in excess of 10 inches covered all or part of 7 counties in Iowa, 4 in Missouri, and 32 in Illinois, and includes most of central Illinois, southeastern Iowa, and northeastern Missouri. The monthly amount at Monmouth, Ill., 20.03 inches, is within less than 2 inches of the total precipitation at that station for the year 1910, and is more than half of the yearly normal. The greatest previous amount in the 16 years' history of the station is 14 inches.

The average precipitation for the district, as shown by the records of 322 stations, is 5.73 inches, 2.87 inches

above the normal. The greatest amount, 20.03 inches, occurred at Monmouth, Ill.; and the least, 0.89 inch, at Pembina, N. Dak. The greatest amount in 24 hours, 7 inches, occurred at Bloomfield, Iowa, on the 28th. Measurable precipitation occurred on an average of 12 days. A trace of snow was recorded at Crosby and Donnybrook, N. Dak., Warroad, Minn., and Elma, Iowa.

SUNSHINE AND CLOUDINESS.

The average number of clear days is 10, partly cloudy 9, and cloudy 11. The duration of sunshine was considerably below the normal.

WIND.

Southeast winds prevailed. The highest velocity reported was 48 miles an hour from the northwest, at Springfield, Ill., on the 6th.

RIVERS.

At the close of the month the rivers in this district were higher than they were at the close of August, and they were also higher than at the close of September, 1910. The highest stage of the Mississippi River at Dubuque, Iowa, was 3.2 feet on the 30th; lowest, 1.2 feet on the 6th; average stage for the month, 2 feet. At Prairie du Chien, Wis., the maximum stage was 2.8 feet on the 29th; lowest, 0.6 foot on the 6th; average for the month, 1.5 feet. The Wisconsin River at Wausau, Wis., ranged from 3.2 feet on the 6th to 6.7 feet on the 15th, the average for the month being 4.5 feet. At Portage, Wis., it ranged from 2.4 feet on the 5th and other dates to 5.1 feet on the 20th; average, 3.5 feet. At Muscoda, Wis., it ranged from 0.9 foot on the 11th to 2.7 feet on the 22d; average, 1.7 feet. The rainfall in the upper portion of the Wisconsin River Valley was comparatively light, which accounts for the low stages in that river. In the Davenport River district the stages of the Mississippi River averaged nearly 2 feet above those reported at the close of August, but through traffic over the Le Claire Rapids had not been resumed. Owing to the excessively heavy rains in central Illinois, southeastern Iowa, and northeastern Missouri, the rivers in those sections overflowed their banks and caused much damage to property. Mr. Clarence J. Root, section director, Springfield Ill., reports as follows:

The floods damaged or destroyed many bridges and culverts, and railroad traffic was delayed on account of washouts and damaged bridges. The Illinois River at La Salle was above the flood stage on the 19th and 20th, but the damage was slight. The river was above the flood stage at Beardstown after the 28th.

The following extracts from the reports of observers will show the conditions in various sections:

Lincoln, Prof. C. S. Ogelvie: Corn in creek bottoms washed away. At end of month streams are badly out of their banks. Small bridges and fences washed away, and the historic Rankin flour mill destroyed.

Alexander, George H. Hall: At the end of the month all streams were raging torrents, washing out bridges and culverts, and ruining practically all corn in the lowlands. At Jacksonville, Mavis Terre Creek was 1½ feet higher than it had been for 25 years. Cellars were flooded.

Windsor, Herbert Rose: Several hundred acres of corn were washed out in bottoms; only half of the clover has been thrashed.

Rushville, H. F. Dyson: The loss of crops in Schuyler County is estimated at more than a half million dollars. There are three streams that overflowed, and this year every patch in the bottoms was in corn. The loss in the drainage district will be considerable.

Clinton, J. F. Ziegler: The heavy rains of September 25 washed out a portion of the dam of an artificial lake at the Chautauqua grounds, allowing the water to completely escape with the loss of its entire stock of fish and devastating fences and fields in its course.

Quincy: Between 75 and 100 bridges and culverts were washed out in Adams County, causing a damage of \$25,000 or \$30,000.

Mr. George Reeder, section director, Columbia, Mo., says:

It is reported that Fabius, North, and South Rivers were in flood, and much of the fertile bottom lands are under water, doing considerable damage to crops. The Mississippi River at Hannibal rose rapidly on the 24th.

SEVERE LOCAL STORMS.

Thunderstorms were frequent and were in many cases accompanied by heavy hail, destructive winds, and torrential rains, the worst of which occurred in central Illinois and southern Iowa. On the afternoon of the 17th a severe thunder and hailstorm crossed the southern portion of Minnesota. At Pipestone, Pipestone County, hail fell to the depth of 3 inches. At Fairmont, in Martin County, the storm was also very severe. In the county east of that place hailstones 4 inches in circumference fell. At Grand Meadow, in Mower County, the storm was unusually violent. A severe and destructive hailstorm occurred in portions of Trempealeau, La Crosse, and Vernon Counties, Wis., on the afternoon of the 11th. The following extracts are taken from La Crosse, Wis., papers of the 12th:

Hailstones as big as hen's eggs shattered thousands of window panes in and about La Crosse shortly after 4 o'clock yesterday afternoon, causing the loss of several thousand dollars. The largest stones did not fall very thickly, one following another at short intervals. The noise made by tin roofs was almost deafening. The greenhouse owners, as usual, were the heaviest losers, over 25,000 square feet of glass was broken, and plants and flowers in several of the greenhouses were cut by falling glass. The hail was accompanied by a drenching rain, one of the heaviest ever experienced within the short space of time during which rain fell. The temperature fell 20° at the time of the storm. Reports indicate that the storm was also severe at Trempealeau, Trempealeau County, and at Veroqua, Vernon County.

A storm that bore every evidence of true tornadic character occurred in the vicinity of Winterset, Iowa, on the afternoon of September 6 between 2.30 and 3 o'clock. The storm cloud presented a white or smoky appearance, and the attendant lightning and thunder were terrific. Spasmodic precipitation, amounting to 0.78 of an inch, fell at Winterset, being very heavy both during and after the passage of the storm cloud, which moved toward a point a little south of east. Hail of the size of hickory nuts fell in places. The storm's path was approximately 20 miles in length and from 30 to 80 rods in width. The following extracts are taken from a report on the storm, rendered by Dr. Robert S. Cooper, cooperative observer at Winterset:

The first material damage was done at Tileville, where the residents saw a funnel cloud bearing down upon them. It appeared as a whirling, smoky mass, and with a roar that was distinctly heard. All the buildings but one were wrecked. The south side of a house almost new was bulged outward and spikes and nails from barns to the north were driven into the west side. Three horses were carried about 100 yards toward the southeast, having been lifted over two fences without injury. A little farther on an outhouse and a chicken house side by side were driven in opposite directions, one north and one south. Still farther on a baby was found under the wreckage of a house beside a hen which had been killed, the child being uninjured. At another place the axle of a buggy was found bent around a tree. Near by a steel bridge in the path of the tornado was whirled into a twisted mass and deposited in the river, 75 or 80 feet downstream. Only 50 yards from the bridge the distribution of the débris evidenced that the wind was from an opposite direction. In all, about 30 buildings were destroyed, but no one was killed or seriously injured. A man walking home in the path of the storm saw it coming, so lay down and took hold of a fence post. He was whipped around and his flesh lacerated by flying sand and dirt, but not hurt much. A cow was blown past him on one side and a horse on the other in a moment's time. Those who saw the cloud say it was funnel shaped, but not steady, tipping from side to side and rising and falling. We have evidence of

TABLE 1.—Climatological data for September, 1911. District No. 5, State of North Dakota.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Number of rainy days, 0.01 inch or more.	Number of partly cloudy days.	Number of cloudy days.	Sky.	Prevailing wind direction.	Observers.						
				Mean.	Departure from the normal.			Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.													
					Highest.	Date.	Greatest.																				
<i>North Dakota.</i>																											
Amenia.	Cass.	954	14	55.8	-1.2	91	1†	30	26	50	2.81	+1.08	0.96	0	8	9	4	17	sw.	C. E. Wood.							
Ashley.	McIntosh.	2,001	16	51.4	-5.7	78	1	30	19†	39	2.70	+1.19	0.70	0	12	5	11	14	se.	F. F. Zimmerman.							
Bottineau.	Bottineau.	1,638	16	52.4†	-2.5	80†	1	29†	25†	41	2.00	-0.91	0.60	0	9	17	5	8	se.	A. J. Carlson.							
Cando.	Towner.	1,438	10	51.8	-	82	3	25	24	36	2.56	-	0.97	T.	8	14	8	12	sw.	E. T. Judd.							
Crosby.	Divide.	5	5	53.4	-2.2	82	1	33	27	33	2.23	+0.83	0.63	T.	8	11	7	12	nw.	H. C. Kashau.							
DeVils Lake.	Ramsey.	1,482	6	53.4	-	82	1	33	27	33	2.23	+1.93	0.98	T.	8	11	7	12	nw.	U. S. Weather Bureau.							
Donnybrook.	Ward.	1,760	12	52.4	-3.2	79	15	28	25	33	3.23	-	-	-	-	-	-	-	w.	C. J. De Vore.							
Dunseith.	Rolette.	14	6	52.8	-	86	1	23	24	42	1.81	-	0.58	0	8	12	10	8	w.	L. H. Trowbridge.							
Edmore.	Ramsey.	1,524	6	52.8	-	86	1	23	24	42	1.81	-	0.58	0	8	12	10	8	w.	H. R. Aslakson.							
Fessenden.	Wells.	1,610	17	59.6	-1.4	95	1	33	19	49	3.45	+1.65	1.10	0	6	9	7	14	nw.	G. T. Seymour.							
Forman.	Sargent.	1,249	17	59.6	-	83	1†	25	24	47	2.06	+0.08	0.80	0	13	8	7	15	s.	A. Maltby.							
Grafton.	Walsh.	827	20	52.9	-2.7	83	1	25	24	47	2.06	-	0.65	0	7	6	13	11	nw.	A. R. T. Wylie.							
Gravette.	McHenry.	1,504	5	52.2	-	79	3†	32	12	47	2.90	-	1.34	0	8	-	-	-	nw.	W. A. Christianson.							
Hannah.	Cavalier.	1,568	6	51.0	-	79	9†	21	24	47	2.05	-	0.76	0	8	-	-	-	nw.	J. Moffatt.							
Hansboro.	Towner.	3	51.6	-	77	1†	26	24	42	2.14	-	0.65	0	9	14	9	7	nw.	Geo. Dale.								
Hillsboro.	Trail.	901	6	57.6	-	85	16	28	26	36	1.68	-	0.52	0	5	12	11	5	nw.	F. E. Mayall.							
Lakota.	Nelson.	1,579	5	52.0	-	80	1	28	24†	38	2.61	-	0.75	0	13	6	19	5	nw.	C. R. Pettes.							
Langdon.	Cavalier.	1,615	16	50.0	-	74	1	27	24	37	2.10	-	0.69	0	11	12	0	18	w.	J. Woolner.							
Larimore.	Grand Forks.	1,134	16	56.4	-2.0	92	1	29	26	45	3.79	+2.08	0.75	0	11	11	3	16	se.	J. Dexter Pierce.							
Lisbon.	Ransom.	1,091	7	56.4	-	92	1	29	26	45	3.79	+2.08	0.75	0	11	11	3	16	se.	H. K. Adams.							
McKinney.	Renville.	1,640	17	52.0	-1.1	80	15	27	25	38	3.63	+2.13	0.90	0	9	7	13	10	nw.	N. P. Swenson.							
Manfred.	Wells.	1,605	10	54.1	-	83	1	27	27	40	2.92	-	0.77	0	12	13	11	6	nw.	P. B. Anderson.							
Mayville.	Trail.	975	15	60.4	-5.0	84	1†	30	25	35	2.61	-0.01	0.90	0	7	13	3	4	nw.	W. C. Gould.							
Minot.	Ward.	1,557	13	54.0	-3.7	82	15	31	25	40	2.28	+1.08	0.80	0	11	15	4	11	w.	J. J. Bates.							
Minto.	Walsh.	820	18	54.0	-2.1	83	1	28	24	39	1.96	-0.20	0.46	0	11	11	7	12	nw.	S. S. Marsh.							
Oriska.	Barnes.	1,270	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	w.	W. E. Williams.							
Park River.	Walsh.	998	8	57.7	-	93	1	28	24	46	2.22	-	0.48	0	11	13	13	4	w.	A. Heyward.							
Pembina.	Pembina.	789	13	52.0	-1.7	80	1†	25	24	50	0.89	-1.44	0.40	0	5	15	3	12	ne.	C. W. Shumaker.							
Power.	Richland.	1,020	19	56.2	-2.0	87	1†	31	25	42	3.90	+2.14	1.76	0	9	11	11	8	se.	J. A. Power.							
Pratt.	McHenry.	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	w.	W. B. Ahern.							
Towner.	do.	3	55.7	-	88	3	30	28	44	1.91	-	0.62	0	6	17	6	7	w.	B. Bagley.								
University.	Grand Forks.	830	19	54.0	-1.4	82	1	27	26	37	1.22	-0.88	0.33	0	14	12	7	11	nw.	U. S. Weather Bureau.							
Wahpeton.	Richland.	962	19	55.3	-3.4	88	2	29	24	40	2.61	+0.48	0.50	0	9	12	7	11	se.	E. G. Burch.							
Wahala.	Pembina.	966	7	54.5	-	79	1	25	24	38	1.73	-	0.52	0	13	20	2	8	n.	Ivan Del. Lee.							
Westhope.	Bottineau.	5	53.8	-	82	1	25	24	38	1.73	-	0.91	0	7	4	18	8	w.	W. A. Meddaugh.								
Willow City.	do.	1,471	18	52.4	-1.9	79	13	27	19	42	2.50	+0.77	0.61	0	9	9	15	6	w.	M. A. Ostby.							
<i>Minnesota.</i>																											
Albert Lea.	Freeborn.	1,229	20	61.2	+0.2	92	1	40	26†	33	3.90	+0.52	1.65	0	8	7	17	6	se.	Edward Carey.							
Alexandria.	Douglas.	1,391	17	57.2	-1.0	89	16	37	5	39	3.85	+1.65	1.20	0	12	13	1	16	nw.	P. O. Unumb.							
Angus.	Polk.	870	9	53.0	-	82	1†	26	25	39	1.46	-	0.47	0	10	12	10	8	n.	John Nadovnik.							
Bagley.	Clearwater.	5	51.6	-	84	17	25	26	45	3.10	-	1.00	0	9	2	19	9	9	se.	Jens Nelson.							
Beardsley.	Bigstone.	1,090	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	w.	R. J. Buckley.							
Beaulieu.	Mahonen.	1,200	9	55.3	-	84	16	25	26	43	2.26	-	0.55	0	9	10	12	8	sw.	Dr. P. A. Slattery.							
Bemidji.	Beltrami.	1,400	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	w.	C. W. Warfield.							
Bird Island.	Renville.	1,039	21	60.0	-0.8	91	16	36	29	43	2.90	-	0.07	0.73	0	12	6	9	15	se.	Dr. F. L. Pufer.						
Caledonia.	Houston.	1,179	19	59.4	-1.3	84	1	36	26†	33	2.36	-	1.51	0.90	0	10	14	4	12	nw.	W. D. Belden.						
Campbell.	Wilkin.	984	2	56.2	-	91	1	31	24	46	2.85	-	0.80	0	10	11	0	19	nw.	J. T. Neissess.							
Cass Lake.	Cass.	1,300	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	w.	C. W. Burns.							
Collegeville.	Stearns.	1,282	18	58.5	-2.1	86	16	41	24†	32	2.95	+0.46	0.83	0	12	13	6	11	s.	Fridolin Trembleur.							
Crookston.	Polk.	863	21	54.1	-2.5	80	1†	31	26	33	1.23	-	0.81	0.55	0	8	12	1	17	s.	A. G. Andersen.						
Detroit.	Becker.	1,364	15	54.6	-2.0	88	16	28	25	46	2.47	-	0.20	0.80	0	6	8	9	13	s.	G. W. Peoples.						
Ely.	St. Louis.	1,240	24	52.2	-	80	16	29	28	34	3.43	-	1.00	0	15	10	10	10	se.	Rev. W. H. Farrell.							
Fairmont (near).	Martin.	1,240	24	61.2	+0.4	93	1	41	19†	34	4.81	+1.77	1.10	0	11	9	11	10	e.	W. F. Wherland.							
Farmington.	Rice.	1,003	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	w.	Dr. A. B. Moulton.							
Fergus Falls.	Dakota.	902	23	60.2	-0.2	89	16	36	30	31	4.55	+1.13	1.24	0	10	9	7	14	sw.	E. D. Akin.							
Fort Ripley.	Ottertail.	1,210	19	58.0	-1.0	81	1	38	24	31	3.91	+1.66	1.09	0	8	14	8	14	s.	C. E. Kissinger.							
Fosston.	Crow Wing.	1,136	4	56.4	-	88	18	29	26	43	3.53	+1.31	1.80	0	7	16	0	14	s.	J. J. Tucker.							
Fram.	Marshall.	1,289	2	53.8	-	85	16	27	26	38	2.13	-	0.70	0	11	14	9	7	nw.	O. N. Hem.							
Glencoe.	McLeod.	1,000	15	61.1	+1.5	86	16	40	19†	40	2.40	-	1.27	0.75	0	5	20	9	1	sw.	A. W. Clark.						
Grand Meadow.	Mower.	1,338	23	60.6	+0.7	81	1	36	26	36	4.58	+1.23	0.99	0	17	9	10	11	se.	F. B. Reed.							
Gull Lake Dam.	Cass.	1,215	17	52.5	-	80	1	29	26	32	3.84	-	0.84	0	11	7	14	9	nw.	C. F. Greening.							
Hallow.	Kittson.	815	12	53.4	-1.8	82	1	25	24	37	2.25	-	0.70	0.80	0	10	14	5	11	s.	G. A. Williams.						
Hinckley.	Norman.	870	5	55.2	-	86	16	29	26</																		

TABLE 1.—Climatological data for September, 1911. District No. 5—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.				Observers.										
				Mean.			Departure from the normal.			Highest.			Lowest.			Greatest daily range.			Total.			Departure from the normal.			Greatest in 24 hours.		Number of rainy days, 0.01 inch or more.			
				Date.	Date.	Date.	Highest.	Date.	Date.	Greatest daily range.	Total.	Greatest in 24 hours.	Total snowfall, unmeted.	Number of clear days.	Number of cloudy days.	Number of partly cloudy days.	Number of days.	Number of cloudy days.	Prevailing wind direction.											
Minnesota—Continued.																														
St. Charles.	Winona.	850	20	61.4	+ 0.4	85*	1†	35*	26	37*	2.67	- 0.90	0.62	0	11	10*	7*	12*	n.	S. W. Gleason.										
St. Cloud.	Sherburne.	1,020	33	59.2	- 0.1	87	16	34	26	37	3.41	+ 0.09	1.02	0	14	13	4	13	se.	J. H. Capser.										
St. Paul.	Ramsey.	837	40	69.0	- 1.3	88	16	39	26	32	5.27	+ 1.85	1.27	0	13	7	12	11	se.	U. S. Weather Bureau.										
St. Peter.	Nicollet.	825	17	61.6	- 0.5	87	1	37	26	35	3.89	+ 0.12	1.30	0	8	9	7	12	s.	State Hospital.										
Sandstone.	Pine.																			A. D. Hale.										
Sandy Lake Dam.	Aitkin.	1,234	18	54.4	- 2.3	79	16	31	12	38	3.27	+ 0.59	0.64	0	10	3	18	9	se.	A. Newstrom.										
State Sanatorium.	Cass.	3		82	16						2.90		0.63	0	17	8	11	11	sw.	Dr. L. B. Ohlinger.										
Stillwater.	Washington.	604	6								3.97		1.15	0	13	11	4	15	se.	Oscar Ostrom.										
Taylor's Falls.	Chisago.	759	4	59.3		87	17	35	26	44	5.56		1.50	0	10	11	7	12	n.	Mpls. Gen. Elec. Co.										
Tracy.	Lynd.																			B. L. English.										
Warroad.	Roseau.	1,069	2	50.1		83	16	24	12	46	2.10		0.55	T.	12	10	6	14	w.	J. H. Sawyer.										
West Concord.	Dodge.	1,232	2																	H. H. Orcutt.										
Winnebago.	Faribault.	1,100	12	61.2	- 0.8	95	1	40	26	37	3.23	+ 0.07	1.93	0	11	11	7	12	se.	H. H. Haight.										
Winnibigoshish.	Itasca.	1,300	23	55.0	- 1.4	81	16	33	12†	34	2.30	- 0.88	0.50	0	15	10	12	8	sw.	John Duncan.										
Winona.	Winona.	700	15	62.6	+ 0.5	93	1	37	30	47	2.90	- 0.83	0.60	0	15	9	6	15	w.	P. C. Myers.										
Worthington.	Nobles.	1,583	16	59.7	- 1.1	88	1	40	19	30	5.49	+ 2.30	2.92	0	9	12	1	17	s.	M. P. Mann.										
Zumbrota.	Goodhue.	917	15	60.0	- 0.6	89	16	32	25	39	3.19		1.10	0	10	10	13	7	se.	W. C. Rowell.										
South Dakota.																														
Milbank.	Grant.	1,148	20	57.9	- 2.9	91	1	35	24†	42	3.19	+ 1.40	0.92	0	10	12	4	14	se.	I. T. Partridge.										
Wisconsin.																														
Antigo.	Langlade.	1,489	17	56.4	- 1.6	85	16	30	26	40	6.01		1.85	0	11	12	5	13	w.	Elton C. Larzelere.										
Barron.	Barron.	1,115	20	56.2	- 2.3	82	16	30	26†	40	6.75	+ 3.61	1.74	0	12	11	9	10	se.	Wm. A. Kent.										
Beloit.	Rock.	750	45	63.0	- 0.6	80	1†	39	30	33	6.70	+ 3.31	2.62	0	10	17	0	13	nw.	Smith Observatory.										
Big St. German Dam.	Villas.	1,590	1	54.0		82	16	26	26	37	3.31		0.76	0	14	12	7	11	sw.	Oscar Brehmer.										
Brodhead.	Green.	812	13	64.2	+ 0.8	93	1	37	30	41	4.71	+ 1.08	1.43	0	12	11	3	13	s.	Hector D. Kirkpatrick.										
Burnett.	Dodge.	880	7	60.8		90	1	33	30	40	5.10		1.46	0	11	10	8	12	se.	Geo. W. Smith.										
Cottage Grove.	Dane.	888																		John E. Mellish.										
Darlington.	Lafayette.	867	5	62.8		92	1	33	30	44	4.48		1.14	0	13	11	8	11	se.	S. P. Nelson.										
Deerskin Dam.	Forest.	1,625	1	51.6		80	1	18	28	47	2.78		2.30	0	10	11	6	12	w.	Wm. E. O'Neal.										
Delavan.	Walworth.	920	20	63.0	+ 0.2	88	1†	35	30	36	8.78	+ 5.37	2.85	0	12	8	10	12	sw.	Elwood S. Austin.										
Dodgeville.	Iowa.	1,116	11																	Geo. H. Butler.										
Downing.	Dunn.	983	9	56.9*	- 1.7	84*	16	28	26	39 ^b	6.54	+ 2.77	1.60	0	10	3 ^b	0 ^b	25 ^b	se.	Eugene F. Stoddard.										
Eau Claire.	Eau Claire.	800	20	59.7	- 1.4	85	1†	34	30	35	6.22	+ 2.29	1.60	0	16	9	12	9	nw.	Robert D. Whifford.										
Grand Rapids.	Wood.	1,021	12	58.8	- 2.2	88	1	32	26	37	7.04	+ 4.11	1.79	0	14	14	4	12	e.	Willis B. Raymond.										
Grantsburg.	Burnett.	1,095	20	58.0	- 0.6	89	16	29	26	45	3.40	- 0.78	1.55	0	6	8	7	15	sw.	Theodore Olsen.										
Hancock.	Waushara.	1,091	19	60.8	- 0.2	90	1	36	30	35	5.81	+ 2.99	1.75	0	13	12	5	13	nw.	Frederick B. Hamilton.										
Hatfield.	Jackson.	973	17	58.8	- 2.0	88	1	29	30	42	6.79	+ 3.30	1.32	0	13	2	18	10	se.	Walter S. Woods.										
Hayward.	Sawyer.	1,197	20	55.4	- 2.2	85	16	28	30	44	5.43	+ 1.50	1.85	0	12	7	9	14	sw.	William E. Swain.										
Hillsboro.	Vernon.	1,000	20	58.8	- 1.7	88	1	32	26	38	5.90	+ 1.69	0.90	0	14	0	21	9	nw.	Emil V. Wernick.										
Koepenick.	Langlade.	1,683	20	54.1	- 4.8	82	1	25	26	38	4.65	+ 3.60	1.79	0	10	10	3	7	sw.	Edward S. Koepenick.										
Lac du Flambeau.	Villas.			1	55.4			37	17	39	30	46	3.61		1.02	0	9	5 ^a	7 ^a	s.	W. J. Lovett.									
La Crosse.	La Crosse.	714	39	61.2	- 0.5	88	1	39	30	33	5.00	+ 0.88	1.31	0	18	6	9	15	s.	U. S. Weather Bureau.										
Lake Mills.	Jefferson.	897	20	62.8	+ 0.4	88	1	38	30	33	6.07	+ 2.88	1.56	0	14	8	14	8	se.	S. Newton Dexter Smith.										
Lancaster.	Grant.	1,070	20	62.5	+ 0.5	89	1	35	30	36	3.43	+ 0.12	1.05	0	10	5	13	11 ^a	se.	Edward Pollock.										
Long Lake.	Oneida.	1,592	3	53.9		82	16	22	28	42	2.74		0.59	0	15	11	9	10	s.	Louis Frank.										
Madison.	Dane.	974	42	62.5	+ 1.4	88	1	43	30	30	5.85	+ 2.67	1.52	0	13	9	7	14	sw.	U. S. Weather Bureau.										
Mather.	Juneau.	962	7	56.8		90	1	30	30	41	6.32		2.04	0	13	8	9	13	e.	Frank Evans.										
Mauston.	do.	882	15	60.1	- 0.7	85	1	32	30	34	5.58	+ 2.42	1.15	0	10	9	11	11	nw.	Eugene L. Hitchcock.										
Meadow Valley.	do.	974	20	58.4	- 1.9	91	1	31	30	45	6.07	+ 2.45	1.63	0	15	3	19	8	se.	Charles H. Johnson.										
Medford.	Taylor.	1,420	22	56.6	- 3.1	85	16	32	26	37	7.32	+ 3.27	1.85	0	11	16	10	4	s.	Wm. Zeit.										
Merrill.	Lincoln.	1,267	5					32	26	36	7.24		2.53	0	11	16	1	13	s.	J. M. Wilson.										
Minocqua.	Oneida.	1,604	7	55.6		82	16	33	28	35	3.51		0.76	0	13	6	14	10	se.	Benjamin W. Applebee.										
Mondovi.	Buffalo.	738	3	60.4		88	17	32	30	36	4.46		1.00	0	16	12	7	11	nw.	Dr. Chas. Hebard.										
Mount Horob.	Dane.	1,226	7	62.0		86	14	37	30	32	4.58		1.15	0	11	15	6	9	sw.	W. M. Lewis.										
Muscooda.	Grant.	666	2	62.4		89	17	37	30	39	4.95		2.58	0	8	6	3	11	n.	Wm. Hessler.										
Neillsville.	Clark.	996	21	59.0	- 0.4	90	16	30	30	41	8.11	+ 4.34	2.40	0	10	10	0	20	nw.	Franc A. R. Van Meter.										
New Richmond.	St. Croix.	990	6	58.2		88	16	33	27	41	4.31		1.27	0	14	7	11	12	se.	Charles W. Staples.										
Osceola.	Polk.	806	20	58.1	- 1.8	88	15	35	26	35	7.01	+ 2.96	2.57	0	13	5	13	12	s.	Flambeau Paper Co.										
Park Falls.	Price.	1,492	20	54.7		87	17	30	26	46	3.90		0.93	0	13	9 ^a	8 ^a	9 ^a	w.	James H. Martin.										
Portage.	Crawford.	809	22					38	30	35	5.50	+ 2.67	1.13	0	15	10	11	9	sw.	Nekoosa-Edwards Paper Co.										
Port Edwards.	Wood.	969	1	60.4		89	1	33	25	40	6.43		2.45	0	12	11	0	19	nw.	James H. Gillis.										
Prairie du Chien.	Price.	690	20	62.6	- 1.2	90	1†	39	30	38	2.78	- 0.66	1.14	0	6	15	3	12	s.	Joseph G. Lash.										

TABLE 1.—Climatological data for September, 1911. District No. 5—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Sky.	Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.								
<i>Iowa—Continued.</i>																						
Boone.....	Boone.....	1,134	6	63.9	96	1	42	19	34	4.42	1.96	0	11	Carl Fritz Henning.
Britt.....	Hancock.....	1,236	14	62.4	+ 0.7	95	1	40	19 ^t	41	4.54	+ 0.80	1.35	0	11	8	12	10	s.	.....	L. H. Goodman.
Buckingham.....	Tama.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.24	0	9	15	0	15	s.	.....	J. S. Guynn.	
Burlington.....	Des Moines.....	644	15	67.6	+ 1.4	94	1	45	30	39	13.17	+ 10.05	3.25	0	13	15	0	15	ne.	.....	Max E. Poppe, Jr.
Carroll.....	Carroll.....	1,265	21	64.3	+ 1.3	95	1	39	19	41	2.29	- 0.60	0.85	0	9	16	0	14	e.	.....	Mrs. Jos. J. Wolfe.
Cedar Rapids.....	Linn.....	733	29	64.6	+ 0.6	92	1	43	30	37	4.05	+ 1.83	1.30	0	8	16	0	14	se.	.....	Chas. B. Graf.
Charles City.....	Floyd.....	1,015	20	62.0	+ 0.3	92	1	37	26	35	4.11	+ 1.31	1.53	0	12	5	9	16	se.	.....	U. S. Weather Bureau.
Clear Lake.....	Cerro Gordo.....	1,241	13	64.4	+ 2.2	96	1	38	26	36	4.43	+ 1.47	1.25	0	14	7	11	12	ne.	.....	Luke Roberts.
Clinton.....	Clinton.....	593	44	65.0	+ 1.7	89	14	41	30	35	5.25	+ 1.94	1.30	0	14	16	7	14	e.	.....	Oscar Stevens.
Columbus Junction §.....	Louise.....	595	10	67.9	+ 2.4	92	1	45	30	33	7.40	+ 4.25	2.00	0	14	9	7	14	se.	.....	J. B. Johnston.
Davenport.....	Scott.....	580	40	67.2	+ 2.5	95	1	45	30	34	5.13	+ 1.99	1.49	0	14	9	7	14	e.	.....	U. S. Weather Bureau.
Decorah.....	Winneshiek.....	875	18	63.0	+ 0.9	92	1	35	30	40	2.98	+ 0.75	1.06	0	9	7	14	se.	.....	F. H. Baker.	
Delaware.....	Delaware.....	1,083	20	62.6	+ 0.8	87	14	38	30	32	2.83	- 0.44	0.67	0	9	11	12	7	se.	.....	William Ball.
Des Moines.....	Polk.....	861	33	67.0	+ 2.0	97	1	46	19	40	7.68	+ 4.61	2.30	0	11	8	8	14	se.	.....	U. S. Weather Bureau.
Dubuque.....	Dubuque.....	639	38	64.0	+ 0.4	90	14	41	30	32	3.56	- 0.03	1.73	0	13	6	10	14	se.	.....	Do.
Earlham.....	Madison.....	9	66.9	.....	.....	97	1	37	19	48	3.50	.....	1.31	0	8	14	2	14	sw.	.....	George Phillips.
Elkader.....	Clayton.....	727	32	63.5	+ 1.0	94	1	34	30	45	5.04	+ 1.20	1.80	0	10	12	6	14	se.	.....	Chas. Reinecke.
Elma.....	Howard.....	2	61.0	.....	.....	87	1	33	26	34	3.16	.....	1.28	T.	13	7	14	9	se.	.....	H. A. Moore.
Esterville.....	Emmet.....	1,298	16	60.3	- 0.4	96	1	38	26	38	4.46	+ 1.23	2.75	0	10	12	6	14	se.	.....	A. O. Peterson.
Fairfield.....	Jefferson.....	27	67.5	+ 3.5	96	1	45	1	51	5.17	+ 2.7	3.80	2.50	0	17	13	7	10	w.	.....	R. Monroe McKenzie.
Fayette.....	Fayette.....	1,003	21	62.2	- 0.1	91	1	33	30	42	4.97	.....	2.40	0	12	13	8	9	se.	.....	R. Z. Latimer.
Forest City.....	Winnebago.....	1,226	17	61.4	- 0.6	96	1	39	26	40	4.83	+ 1.21	1.37	0	8	10	8	12	se.	.....	J. A. Peters.
Fort Dodge.....	Webster.....	1,126	11	64.6	+ 2.0	99	1	40	26	42	8.38	+ 3.81	4.50	0	7	10	5	16	sw.	.....	J. F. Monk.
Fort Madison.....	Lee.....	516	62	.....	.....	.....	.....	.....	.....	.....	13.21	+ 9.40	4.50	0	10	5	9	16	sw.	.....	Miss L. A. McCready.
Gilman.....	Marshall.....	1,052	12	61.8	- 0.1	85	1	30	26	30	3.54	- 0.09	2.21	0	10	9	10	11	se.	.....	J. L. Wylie.
Grand Meadow.....	Clayton.....	1,180	20	61.8	- 0.1	85	1	32	26	30	3.54	- 0.09	1.85	0	10	9	10	11	se.	.....	F. L. Williams.
Grimmell.....	Poweshiek.....	1,023	19	66.4	+ 2.6	99	1	42	26	43	7.08	+ 4.73	2.13	0	12	8	10	12	w.	.....	D. W. Brainard.
Grundy Center.....	Guthrie Center.....	976	20	65.2	+ 2.1	95	1	35	26	43	5.59	+ 2.34	1.73	0	10	18	0	12	se.	.....	J. B. Calderwood.
Hampton.....	Franklin.....	1,155	21	64.0	+ 1.1	97	1	38	26	40	5.12	+ 1.56	1.70	0	9	5	15	10	se.	.....	D. G. Beardsey.
Humboldt.....	Humboldt.....	1,095	23	64.2	+ 1.7	97	1	38	19	41	4.24	+ 1.07	1.32	0	9	22	4	4	sw.	.....	E. C. Grenelle.
Independence.....	Buchanan.....	921	47	63.6	+ 1.9	89	17	38	30	39	2.52	- 1.43	0.70	0	10	15	9	6	se.	.....	Henry S. Wells.
Indianola.....	Warren.....	969	20	68.6	+ 3.1	97	1	44	26	35	6.94	+ 3.84	2.26	0	10	9	6	15	se.	.....	R. E. Dudley.
Iowa City.....	Johnson.....	683	51	64.5	+ 0.9	92	1	44	19	42	5.07	+ 1.32	1.22	0	13	12	1	17	se.	.....	Prof. J. L. Tilton.
Iowa Falls.....	Hardin.....	1,170	18	61.4	- 0.2	94	1	36	26	46	3.19	+ 0.22	0.88	0	7	12	5	13	se.	.....	Prof. A. G. Smith.
Jefferson.....	Greene.....	12	67.0	.....	101	1	39	29	52	2.07	- 1.40	0.85	0	8	11	6	13	s.	.....	M. E. Hall.	
Keokuk.....	Lee.....	547	40	69.4	+ 3.0	94	17	51	30	28	7.67	+ 3.70	2.68	0	16	11	6	14	se.	.....	U. S. Weather Bureau.
Kenosauqua.....	Van Buren.....	644	19	68.4	+ 1.5	101	1	47	19	47	10.25	+ 5.85	2.36	0	17	3	14	13	se.	.....	J. H. Landes.
Knoxville.....	Marion.....	920	16	68.8	+ 2.0	99	1	45	19 ^t	41	6.80	+ 3.28	1.72	0	9	7	7	16	ne.	.....	Casey & Bellville.
Lacona.....	Warren.....	12	.....	.....	.....	.....	.....	.....	.....	.....	6.26	+ 2.43	2.25	0	12	7	18	5	se.	.....	J. B. Alter.
Le Claire.....	Scott.....	576	11	61.1	.....	.....	.....	.....	.....	.....	6.16	+ 2.38	1.05	0	13	8	8	13	se.	.....	Miss M. T. Disney.
Marshalltown.....	Marshall.....	947	19	64.9	+ 0.8	98	1	42	26	47	6.83	+ 3.88	2.27	0	14	11	4	15	nw.	.....	Ralph B. Reasoner.
Mason City.....	Cerro Gordo.....	1,132	14	61.8	- 1.2	93	1	34	26	41	3.53	+ 1.17	1.05	0	8	9	11	10	se.	.....	J. S. Mills.
Monroe.....	Jasper.....	30	68.0	.....	92	47	44	26	34	7.99	.....	3.83	0	6	14	6	10	s.	.....	J. A. Dibel.	
Mount Pleasant.....	Henry.....	729	30	68.0	+ 3.0	93	1	47	26 ^t	30	10.75	+ 7.07	2.94	0	16	10	11	9	sw.	.....	J. W. Edwards.
Muscatine.....	Muscatine.....	51	.....	.....	.....	.....	.....	.....	.....	.....	8.58	+ 4.86	2.00	0	15	16	16	17	se.	.....	William Morris.
New Hampton.....	Chickasaw.....	1,166	14	64.0	+ 2.3	88	1	39	26	35	3.85	+ 0.34	1.91	0	9	14	8	8	s.	.....	A. F. Kemman.
Northwood.....	Worth.....	1,222	15	61.0	+ 0.2	92	1	35	26	38	3.5	- 0.23	1.54	0	16	12	13	6	sw.	.....	Chas. H. Dwelle.
Olin.....	Jones.....	760	13	64.2	+ 1.1	90	1	39	30	41	4.19	+ 0.96	1.17	0	12	11	13	6	sw.	.....	Frank W. Post.
Osage.....	Mitchell.....	1,184	24	63.4	+ 3.4	94	1	38	26	38	4.07	+ 0.51	1.49	0	8	12	5	13	sw.	.....	Dr. A. D. Bundy.
Oskaloosa.....	Mahaska.....	843	35	67.5	+ 3.0	99	1	44	19 ^t	45	5.81	+ 2.78	2.33	0	10	13	2	15	se.	.....	Joseph Boyd.
Ottumwa.....	Wapello.....	649	16	70.1	+ 2.9	103	1	47	19 ^t	42	6.22	+ 2.19	1.99	0	11	13	9	9	nw.	.....	Chester Poiter.
Pella.....	Marion.....	877	9	67.2	.....	100	1	41	19	53	6.94	.....	3.03	0	12	19	2	9	se.	.....	J. H. Ver Steeg.
Perry.....	Dallas.....	975	10	67.2	+ 2.8	98	1	40	19	42	3.19	+ 0.49	0.95	0	8	12	9	9	se.	.....	Ed. S. Gray.
Plover.....	Pocahontas.....	1,426	15	63.8	+ 1.0	97	1	36	19 ^t	43	3.49	- 0.90	1.30	0	5	21	4	5	se.	.....	J. S. Smith.
Pocahontas.....	do.....	1,248	7	64.2	.....	97	17	38	19	40	4.60	.....	1.61	0	9	17	6	7	s.	.....	F. E. Hronek.
Ridgeway.....	Winneshiek.....	1,215	13	62.8	- 0.4	90	17	35	26	35	4.54	- 0.23	1.54	0	16	12	11	7	s.	.....	Arthur Betts.
Rockwell City.....	Calhoun.....	15	64.1	+ 0.3	95	1	45	25 ^t	39	9.20	+ 6.02	5.25	0	8	19	10	1	ne.	.....	C. M. Randall.	
Sac City.....	Sac City.....	1,278	35	64.2	+ 2.7	94	1	42	26	40	5.76	+ 3.48	2.80	0	10	11	7	12	se.	.....	E. N. Baily.
St. Charles.....	Madison.....	1,070	16	69.3	+ 3.9	99	1	46	26	30	3.75	+ 0.11	1.30	0	11	10	15</					

TABLE 1.—Climatological data for September, 1911. District No. 5—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.	Prevailing wind direction.	Observers.			
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unsupplemented.	Number of rainy days.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
<i>Illinois.</i>																					
Aledo.	Mercer.	738	11	67.3	+ 1.9	92	1	43	30	34	13.74	+ 9.34	3.51	0	17	8	12	10	se.	William B. Frew.	
Alexander.	Morgan.	670	18	70.5	+ 2.5	93	2	49	22 ^a	32	12.22	+ 8.28	4.11	0	19	9	7	14	sw.	George H. Hall.	
Antioch.	Lake.	861	10	64.4	+ 1.0	93	1	41	26	41	6.16	+ 1.81	1.82	0	8	6	7	17	nw.	J. C. James.	
Astoria.	Fulton.	650	12	68.8	+ 3.4	93	1	48	22	34	14.22	+ 9.68	5.60	0	14	10	11	9	nw.	Edward V. Bohl.	
Aurora.	Kane.	687	32	64.7	+ 1.0	88	2	43	22	35	7.23	+ 3.57	2.84	0	12	7	6	17	ne.	W. Holden.	
Beardstown.	Cass.	448	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Mrs. L. M. Rice.		
Bement.	Piatt.	700	4	70.8	—	92	2	41	30	31	10.58	—	2.11	0	18	14	8	8	s.	Rev. C. S. Adams.	
Bloomington.	McLean.	840	20	68.6	+ 0.6	94	1 ^b	42	30	32	10.25	+ 6.38	1.93	0	20	11	1	18	sw.	Prof. H. N. Pearce.	
Calo.	Alexander.	359	33	76.7	+ 6.5	93	18	58	22	24	15.15	+ 2.68	1.56	0	13	7	13	10	s.	U. S. Weather Bureau.	
Carbondale.	Jackson.	412	6	77.6	—	97	12	52	22	33	5.70	+ 3.09	2.16	0	14	10	16	4	sw.	State Normal University.	
Carlinville.	Macoupin.	663	21	72.6	+ 3.2	96	14	48	22	31	5.98	+ 2.38	1.23	0	14	15	13	2	sw.	W. T. Eddy.	
Carlyle.	Clinton.	470	26	—	—	—	—	—	—	—	8.79	+ 5.17	1.70	0	13	—	—	—	—	J. E. Rogan.	
Chester.	Randolph.	380	5	—	—	—	—	—	—	—	7.00	—	1.75	0	14	—	—	—	—	F. A. Gollon.	
Clinton.	Dewitt.	727	1	68.7	—	92	2	45	30	30	10.91	—	3.51	0	16	11	10	9	sw.	J. Frank Ziegler.	
Coatsburg.	Adams.	763	19	69.8	+ 2.1	93	2	50	19	32	10.79	+ 6.08	2.25	0	15	10	3	17	se.	Dr. J. R. Lambert.	
Cobden.	Unlon.	656	28	76.2	+ 5.1	96	12 ^c	51	22	32	6.13	+ 2.74	1.73	0	11	10	11	9	s.	John Buck.	
Dakota.	Stephenson.	929	6	64.0	—	88	1	38	30	34	5.78	—	3.00	0	12	2	19	9	se.	Rev. G. W. Kersteller.	
Decatur.	Macon.	685	20	69.0	+ 1.0	92	2 ^c	47	30	39	12.00	+ 8.30	2.38	0	15	12	9	9	sw.	Prof. J. H. Coonradt.	
Dixon.	Lee.	725	21	65.0	+ 0.4	90	1 ^c	40	30	35	6.77	+ 3.25	1.25	0	13	9	18	3	sw.	H. U. Bardwell.	
Duquoin.	Perry.	459	23	76.0	+ 4.7	97	12	50	22	38	10.26	+ 7.38	1.63	0	12	15	3	sw.	G. H. Knetzger.		
Dwight.	Livingston.	600	18	67.8	+ 3.0	96	1 ^c	41	30	40	6.67	+ 3.63	0.92	0	16	6	6	18	se.	Edward O. Welch.	
East St. Louis.	St. Clair.	418	—	—	—	—	—	—	—	—	7.16	—	3.27	0	11	—	—	—	—	W. McK. Brown.	
Edwardsville.	Madison.	554	12	—	—	—	—	—	—	—	10.71	+ 6.62	2.10	0	13	—	—	—	—	W. H. Morgan.	
Elgin.	Kane.	716	4	66.0	—	91	1	43	30	36	5.66	—	1.87	0	15	5	17	8	ne.	Elgin Observatory.	
Galva.	Henry.	842	19	66.8	+ 1.3	96	1	42	30	41	8.29	+ 4.65	1.58	0	14	9	4	17	sw.	Prof. F. U. White.	
Grafton.	Jersey.	422	18	—	—	—	—	—	—	—	5.49	+ 1.96	2.30	0	8	—	—	—	—	R. C. Goodrich.	
Greenville.	Bond.	635	33	72.4	+ 3.4	92	2 ^c	53	20	29	11.66	+ 8.04	2.08	0	14	10	4	16	sw.	M. S. Oudyn.	
Griggsville.	Pike.	650	26	70.4	+ 2.3	94	2	52 ^d	30	30	13.77	+ 9.51	3.15	0	13	11	10	9	se.	George F. Kneeland.	
Havana.	Mason.	475	19	71.7	+ 2.5	97	2 ^c	49 ^d	30	28 ^d	13.14	+ 8.79	2.83	0	14	7	21	2	s.	F. & C. Borgelt.	
Henry.	Marshall.	500	23	68.2	+ 2.8	94	2	43	30	31	7.19	+ 3.80	1.29	0	16	6	4	10	ne.	Dr. F. A. Powell.	
Hillsboro.	Montgomery.	675	17	71.6	+ 2.1	94	14	50	17	42	7.46	+ 3.74	2.40	0	11	14	2	14	s.	Ira L. Woodward.	
Joliet.	Will.	541	20	64.9	+ 0.3	89	1 ^c	45	22	36	12.27	+ 8.30	4.20	0	18	6	10	14	sw.	F. M. Muhlig.	
Kishwaukee.	Winnebago.	730	23	64.8	+ 1.3	90	1	39	30	37	5.48	+ 2.36	2.33	0	14	12	9	9	se.	George Stevens.	
La Grange.	Cook.	657	19	65.2	+ 1.1	92	1	43	26	35	3.64	+ 0.16	1.35	0	9	10	12	8	n.	Prof. F. E. Sanford.	
La Harpe.	Hancock.	698	32	69.2	+ 2.9	96	1	48	20	40	11.84	+ 7.66	3.30	0	13	12	12	6	se.	George E. Campbell.	
Lanark.	Carroll.	882	22	64.3	+ 1.6	91	1	36	30	40	6.89	+ 3.45	1.67	0	14	14	8	8	se.	M. N. Wertz.	
La Salle.	Lasalle.	536	33	67.2	+ 3.3	92	1	43	30	32	7.42	+ 4.22	1.90	0	19	7	11	12	e.	U. S. Weather Bureau.	
Lincoln.	Logan.	482	23	68.7	+ 1.4	91	2	46	22	34	14.31	+ 10.40	3.47	0	16	10	15	5	sw.	Prof. C. S. Oglevee.	
Loami.	Sangamon.	624	11	—	—	—	—	—	—	—	15.89	+ 11.66	5.35	0	15	10	0	20	w.	H. C. Foster.	
Manteno.	Kankakee.	711	—	—	—	—	—	—	—	—	8.66	—	2.75	0	15	18	7	5	sw.	J. F. Schmeltzer.	
Martinton.	Iroquois.	633	24	67.1	+ 2.2	97	1 ^c	44	30	47	9.40	+ 5.76	2.90	0	15	11	7	12	se.	Joseph H. Peltier.	
Mascoutah.	St. Clair.	425	21	75.7	+ 5.5	99	2 ^c	49	20	41	5.85	+ 2.08	1.85	0	12	15	10	5	sw.	George Heinrich.	
Minonk.	Woodford.	745	18	69.2	+ 2.9	99	2	40	30	40	10.13	+ 6.09	4.64	0	19	9	4	17	se.	M. H. Pfaffle.	
Monmouth.	Warren.	784	19	67.8	+ 1.7	95	1 ^c	44	30	40	20.03	+ 15.07	4.48	0	16	11	4	15	se.	Dr. J. C. Hutchison.	
Morrison.	Whiteside.	685	17	65.0	+ 0.6	90	1	41	30	38	5.57	+ 1.94	1.02	0	18	8	14	8	nw.	S. A. Maxwell.	
Morrisonville.	Christian.	638	12	70.4	+ 2.3	92	14	47	22	32	8.99	+ 5.52	2.16	0	13	14	8	8	se.	J. D. Lewis.	
Mount Vernon.	Jefferson.	511	17	73.7	+ 3.2	95	14	53	20	33	7.51	+ 3.85	2.59	0	11	10	7	13	sw.	Theodore P. Stelle.	
Oregon.	Ogle.	702	7	65.9	+ 1.0	90	14	38	30	33	7.57	—	3.00	0	12	8	7	15	s.	Samuel Ray.	
Ottawa.	Lasalle.	500	25	67.2	+ 1.9	90	1 ^c	43	30	33	6.88	+ 3.31	1.70	0	13	10	8	12	sw.	Miss Maude M. Harris.	
Pana.	Christian.	692	25	70.6	+ 2.8	90	14	52	20	26	10.87	+ 7.14	2.86	0	16	10	9	11	nw.	C. W. Sibley.	
Pearl.	Pearl.	609	33	67.8	+ 3.5	95	2	44	30	39	12.30	+ 9.18	3.37	0	20	5	11	14	s.	U. S. Weather Bureau.	
Pontiac.	Livingston.	546	9	69.2	—	95	2	44	30	34	11.81	—	3.95	0	18	9	11	10	sw.	George Butterworth.	
Quincy.	Adams.	481	72.6	—	—	95	13	53	19	33	15.71	—	5.66	0	16	—	—	—	—	Fred J. Brinkett.	
Riley.	McHenry.	956	52	64.3	+ 2.6	89	1	42	30	33	4.40	+ 0.67	1.65	0	14	7	12	11	sw.	John West James.	
Roberts.	Ford.	774	—	—	—	—	—	—	—	—	7.77	—	1.76	0	17	10	12	8	sw.	R. E. Bradbury.	
Rockford.	Winnebago.	763	19	63.4	0	87	1	40	30	33	6.56	+ 3.55	1.81	0	11	15	0	15	—	—	Hosmer C. Porter.
Rushville.	Schaulyer.	670	20	69.6	+ 2.8	93	1	41	20	29	14.65	+ 10.23	4.77	0	14	3	2	23	s.	H. F. Dyson.	
St. Charles.	Kane.	700	16	65.2	+ 1.0	93	1	41	30	41	6.91	+ 2.19	2.75	0	15	6	18	6	ne.	Dr. William H. Bishop	
St. Peter.	Fayette.	500	9	73.2	+ 3.7	97	2	51	23	36	9.50	+ 5.92	1.95	0	12	9	13	8	sw.	M. L. Lansford.	
Sparta.	Randolph.	538	25	75.2	+ 5.4	95	14	50	21	32	6.74	+ 3.30	1.69	0	12	15	14	1	e.	James A. Caldwell.	
Springfield.	Sangamon.	644	33	70.0	+ 3.6	92	14	51	30	27	10.68	+ 7.31	2.64	0	19	9	6	15	se.	Section Center.	
Streator.	Lasalle.	626	18	67.0	+ 0.6	95	1	42	30	42	6.77	+ 3.17	1.35	0	17	14	1	15	sw.	Miss Lora Sweetser.	
Sullivan.	Moultrie.	530	11	70.8	+ 2.5	94	2	49	22	33	13.23	+ 9.38	3.67	0	14	8	14	8	sw.	C. A. Corbin.	
Sycamore.	Dekalb.	855	31	64.5	+ 1.8	97 ^a	1	38	30	46 ^a </											

TABLE 2.—*Daily precipitation for September, 1911. District No. 5, North Dakota.*

Stations.	Watershed.	Day of month.																													Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
<i>North Dakota.</i>																																		
Amenia.	Red.	.08	.12	..	.30	.70	.45	.96	T.	2.81		
Ashley.	Missouri.	.02	..	..	.04	.70	.06	.04	..	.11	.60	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.70
Bottineau.	Mouse.	.02	..	..	.16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.00
Cando.	Sheyenne.	.36	..	..	.97	.48	T.	..	.11	.60	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.56
Crosby.	Mouse.	..	..	..	.53	.12	.16	T.	.12	.51	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.22
Devils Lake.	Sheyenne.	T.	..	..	.06	.98	..	.49	.04	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.23
Donnybrook.	Mouse.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dunseith.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Edmore.	Sheyenne.	..	..	..	.45	.58	..	..	.12	.13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1.81
Fessenden.	James.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Forman.	Sheyenne.	..	..	..	1.10	..	1.05	..	..	T.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.45
Grafton.	Red.	.11	..	..	.03	..	.01	.08	.29	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.06
Granville.	Mouse.	..	..	..	.41	.34	.45	..	.09	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.90
Hannah.	Pembina.02	2.05		
Hansboro.	Red.	.0620	2.14		
Hillsboro.	..	..	..	..	.09	.52	.19	.51	T.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1.68
Lakota.	Sheyenne.	T.	..	..	.75	.38	.20	.12	.30	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.61
Langdon.	Pembina.	..	..	..	.07	.69	.05	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.10
Larimore.	Red.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lisbon.	Sheyenne.	..	..	..	.65	.75	.70	.54	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.79
McKinney.	Mouse.	..	..	..	10*	.90	.31	T.	T.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.63
Manfred.	Sheyenne.	T.	..	..	.53	.77	.54	.03	.18	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.92
Mayville.	Red.	2.61		
Minot.	Mouse.	..	..	..	.05	.80	.19	.41	.01	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.28
Minto.	Red.	..	..	..	.10	..	.07	.08	.39	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1.96
Oriska.	Sheyenne.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Park River.	Red.08	..	.14	..	.15	2.22		
Pembina.	do.	0.89		
Power.	Sheyenne.	3.90	
Pratt.	Mouse.		
Towner.	do.	1.91		
University.	Red.	..	..	..	.03	.24	.03	.21	.01	.04	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1.46
Wahpeton.	Pembina.	..	..	..	.06	.37	.50	.47	.42	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.61
Wahala.	Mouse.39	T.	T.	T.	.16	T.	1.73		
Westhope.	..	..	..	..	.07	.18	.57	.06	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.68
Willow City.	do.	..	..	..	.22	.32	.61	.11	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.50
<i>Minnesota.</i>																																		
Albert Lea.	Mississippi.	..	..	..	1.65	..	.40	.05	.20	T.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.90
Alexandria II.	do.	..	..	..	.06	T.	..	.17	.45	.25	.82	.02	T.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.85
Angus.	Red.	..	..	..	.06	..	..	.17	..	..	.08	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1.46
Bagley.	do.	..	..	..	.30	..	..	1.00	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.10
Beardsley.	Minnesota.	2.26		
Beaufieu.	Red.	..	..	..	.15	..	.55	.40	.15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3.23
Bemidji.	Mississippi.	..	..	..	.07	.09	..	1.18	..	..	.58	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.90
Bird Island.	Minnesota.	..	..	..	.01	..	.68	.24	.73	.02	.03	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.66
Caledonia II.	Mississippi.	..	..	..	.12	..	.52	..	.13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2.85
Campbell II.	Red.	..	..	..	.06	..	.36	.20	.42	.43	.02	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1.75
Cass Lake II.	Mississippi.	T.	2.95		
Collegeville.	do.	..																																

TABLE 2.—*Daily precipitation for September, 1911. District No. 5—Continued.*

Stations.	Watershed.	Day of month.																													Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
<i>Minnesota—Con.</i>																																		
State Sanatorium.	Mississippi.	.10	T.	.40	.25	.63	.10	.02			.56	.04	.05	.06	.26			.07		.05	.06		.06		.10	.01	.61	.04	.08	2.90				
Stillwater ||.	St. Croix.		T.	.14	1.12	.32	.04											.04														3.97		
Taylors Falls.	do.		T.	1.50	.15	.07	T.	.02			1.32				.40			.95			.15		T.	.20		.02	.09		1.15		T.	5.56		
Tracy.	Minnesota.																																	
Warroad.	Rainy.																																	
West Concord.	Mississippi.																																	
Winnebago ||.	Minnesota.																																	
Winnibigoshish.	Mississippi.																																	
Winona.	do.																																	
Worthington ||.	Des Moines.																																	
Zumbrota.	Mississippi.																																	
<i>South Dakota.</i>																																		
Milbank ||.	Minnesota.	.03		.52	.24	.92	.66	T.																									3.19	
<i>Wisconsin.</i>																																		
Antigo.	Wisconsin.	.28		.26	T.	.55					T.	.23		T.	.85	T.		.72															6.01	
Barron.	Chippewa.			.83	1.38	.06	.23				T.	.40			.48			.17														6.75		
Beloit.	Rock.			.13		.25					.15	.10			.21																	6.70		
Big St. Germain Dam.	Wisconsin.	.05		.12	.41	T.	.21	T.				.02		T.	.70																	3.31		
Brodhead.	Rock.																																	
Burnett.	do.		T.																															
Cottage Grove.	do.																																	
Darlington.	do.																																	
Deerskin Dam.	Wisconsin.																																	
Delavan.	Rock.																																	
Dodgeville.	do.																																	
Downing.	Chippewa.																																	
Eau Claire.	do.																																	
Grand Rapids ||.	Wisconsin.																																	
Grantsburg.	St. Croix.																																	
Hancock.	do.																																	
Hatfield.	Black.																																	
Hayward.	St. Croix.	.04		1.85	.40	.10	.20				T.																							
Hillsboro.	Wisconsin.	.35																																
Koepenick.	do.																																	
Lac du Flambeau.	Chippewa.																																	
La Crosse.	Mississippi.																																	
Lake Mills.	Rock.																																	
Lancaster.	Mississippi.																																	
Long Lake.	Wisconsin.	.01		.02	.17	.31	.31																											
Madison.	Rock.																																	
Mather ||.	Wisconsin.																																	
Mauston.	do.																																	
Meadow Valley.	do.																																	
Medford.	Black.																																	
Merrill.	do.																																	
Minocqua.	do.																																	
Mondovi.	Mississippi.																																	
Mount Horeb.	Rock.																																	
Muscosa ||.	Wisconsin.																																	
Neillsville.	Black.																																	
New Richmond.	St. Croix.																																	
Osceola ||.	do.																																	
Park Falls.	Chippewa.																																	
Portage.	Wisconsin.																																	
Port Edwards.	do.																																	
Prairie du Chien ||.	Mississippi.																																	
Prairie du Sac.	Chippewa.																																	
Prentice.	Chippewa.																																	
Rhinelander.	Wisconsin.	.01		.53	.01	.52																												
Shullsburg.	Mississippi.																																	
Solon Springs.	St. Croix.																																	
Spooner.	do.																																	
Stanley.	Chippewa.																																	
Stevens Point.	Wisconsin.</td																																	

TABLE 2.—*Daily precipitation for September, 1911. District No. 5—Continued.*

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<i>Iowa—Continued.</i>																															
Davenport.....	Mississippi.....	T.	.05	..	.80	T.	T.	..	1.12	T.	.09	.41	.28	..	.01	..	.48	.15	..	T.	.14	.01	..	.08	1.49	..	.02	5.13			
Decorah.....	do.....	T.	.55	..	.62	.03	..	.10	..	T.	.28	..	..	..	T.	1.06	T.	.26	T.	T.	..	..	.12	.03	..	.08	2.98			
Delaware.....	do.....	T.	T.	.62	.03	..	..	..	..	T.	..	..	..	..	T.	.63	.67	.42	..	..	..	..	..	..	..	..	..	..	..	2.83
Des Moines.....	Des Moines.....	T.	.01	2.22	.22	T.	T.	1.58	..	T.	.08	T.	..	..	T.	.08	T.	.33	..	..	..	..	..	..	..	..	..	..	7.68	
Dubuque.....	Mississippi.....	.01	..	.33	T.	..	..	..	..	T.	.02	..	.07	T.	T.	..	.82	.13	.52	.05	..	.02	.01	..	.95	.18	..	2.19		
Earlham.....	Raccoon.....	.10	..	.50	..	..	..	..	..	..	..	..	..	..	..	T.	.25	.07	..	..	..	..	..	..	..	..	..	..	..	3.56
Elkader.....	Mississippi.....	.28	.45	..	..	..	..	..	..	..	..	..	..	..	..	T.	1.80	.62	..	..	..	..	..	..	..	..	..	..	..	3.50
Elma.....	Wapsipinicon.....	T.	.23	.12	.25	..	.03	..	..	..	.01	.08	.03	..	..	T.	1.28	.01	..	T.	T.	T.	..	..	..	..	..	..	..	3.16
Estherville |||	Des Moines.....	.10	.25	..	.30	T.	..	2.75	..	..	..	..	..	..	..	T.	.25	..	.26	..	.10	..	..	..	..	..	..	..	..	4.46
Fairfield.....	Skunk.....	T.	.07	.88	..	.20	..	.22	..	..	.16	T.	.20	.01	.04	..	..	.17	.42	.01	..	2.50	.04	..	..	..	..	..	..	7.27
Fayette.....	Mississippi.....	.03	12	.65	.02	.03	..	.32	..	.03	..	T.	..	2.40	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4.97	
Forest City |||	Cedar.....	.44	..	.41	..	.83	..	..	..	..	..	..	..	..	..	T.	1.37	..	..	..	..	..	..	..	..	..	..	..	..	4.83
Fort Dodge |||	Des Moines.....	T.	..	.80	..	2.15	..	..	..	..	4.50	T.	..	..	..	T.	.05	..	..	..	..	..	..	..	..	..	..	..	..	8.38
Fort Madison.....	Mississippi.....	T.	T.	4.50	.11	..	.15	T.	..	.45	.35	T.	T.	..	..	T.	.22	.43	..	.55	..	..	..	..	..	..	..	..	13.21	
Gilman.....	Iowa.....	.07	.20	..	..	..	..	..	..	..	..	..	..	..	..	T.	.30	..	T.	.41	..	..	..	..	..	..	..	..	..	3.49
Grand Meadow.....	Mississippi.....	.19	.40	..	..	..	..	..	..	..	..	..	..	..	..	T.	1.85	.05	..	.33	T.	.05	T.	..	..	..	..	..	..	3.54
Grinnell.....	Iowa.....	1.10	..	.38	..	.04	1.37	..	T.	.91	.15	..	..	..	T.	.05	..	.44	..	T.	.05	..	T.	..	..	..	..	..	7.08	
Grundy Center.....	Cedar.....	.12	..	.80	..	1.30	..	..	..	..	.51	.01	..	..	..	T.	1.73	.02	.50	..	..	..	..	..	..	..	..	..	5.59	
Guthrie Center.....	Raccoon.....	T.	T.	..	..	..	..	..	..	..	..	..	..	..	..	T.	.06	..	..	..	..	..	..	..	..	..	..	..	..	5.59
Hampton.....	Cedar.....	..	..	1.15	..	..	..	..	..	..	..	..	..	..	..	T.	.65	..	..	..	..	..	..	..	..	..	..	..	..	5.12
Humboldt.....	Des Moines.....	.36	..	.66	..	1.32	..	..	..	..	..	..	..	..	..	T.	.08	..	..	..	T.	.05	..	..	..	..	..	..	..	4.24
Independence.....	Wapsipinicon.....	.05	.70	..	..	..	..	..	..	..	..	..	..	..	..	T.	.20	..	T.	.10	..	..	..	..	..	..	..	..	..	2.52
Indianola.....	Des Moines.....	T.	.15	.03	1.86	..	.02	1.42	..	..	.26	..	..	..	..	T.	.05	..	..	..	..	..	..	..	..	..	..	..	..	5.07
Iowa City |||	Iowa.....	..	..	.28	T.	.26	..	..	..	..	.61	1.12	..	1.12	.06	T.	T.	..	..	..	..	..	..	..	..	..	..	..	..	3.19
Iowa Falls |||	Des Moines.....	T.	T.	.85	8.07
Jefferson.....	Raccoon.....	.06	.07	.15	T.	.28	.06	7.67
Keeokuk.....	Mississippi.....	.15	.06	.95	..	.05	..	..	..	..	.05	..	..	..	..	T.	.15	..	..	..	..	..	..	..	..	..	..	..	..	10.25
Kenoshaque |||	Des Moines.....	T.	.07	15	11	2.10	..	.10	.02	T.	.15	..	.04	1.10	T.	.13	.14	.04	..	T.	.06	..	..	..	..	..	..	..	..	6.80
Knoxville.....	do.....	23	T.	1.50	..	T.	..	1.70	..	T.	.06	T.	..	..	T.	.06	..	..	..	..	..	..	..	..	..	..	..	..	..	2.20
Lacona.....	do.....	.28	.12	.75	..	.01	.01	.10	..	T.	.30	..	..	..	T.	.03	..	.42	..	..	..	..	..	..	..	..	..	..	6.26	
Le Claire |||	Mississippi.....	T.	.11	..	.85	T.	..	.11	..	T.	.72	T.	.60	..	..	..	.30	..	..	..	..	..	..	..	..	..	..	..	6.16	
Marshalltown |||	Iowa.....	..	..	.58	T.	.50	..	T.	1.50	..	.27	.03	..	..	..	T.	.36	.02	..	..	..	..	..	..	..	..	..	..	..	6.83
Mason City.....	Cedar.....	.12	..	.58	..	..	..	..	..	..	..	..	..	..	..	T.	.05	..	..	..	..	..	..	..	..	..	..	..	..	3.53
Monroe.....	Des Moines.....	T.	..	3.83	..	..	..	..	..	..	..	..	..	..	..	T.	.11	T.	..	..	..	..	..	..	..	..	..	..	..	7.99
Mount Pleasant.....	Skunk.....	T.	.05	1.05	.65	.34	.09	..	.02	..	.81	..	..	..	..	T.	.15	.45	..	..	..	..	..	..	..	..	..	..	..	10.75
Muscatine |||	Mississippi.....	T.	.02	.20	..	.87	T.	.02	2.00	..	..	1.21	1.17	.35	..	T.	.05	..	..	T.	.17	..	..	..	..	..	..	..	..	8.58
New Hampton.....	Wapsipinicon.....	.10	.58	T.	.04	T.	..	..	..	T.	.14	..	..	..	..	T.	.40	..	T.	T.	..	..	..	..	..	..	..	..	3.85	
Northwood.....	Cedar.....	.13	.33	..	..	..	..	..	..	..	.58	..	..	..	..	T.	.08	..	T.	T.	..	..	..	..	..	..	..	..	2.17	
Olin.....	Wapsipinicon.....	.60	..	.52	..	..	..	..	..	..	.19	..	..	..	..	T.	.49	..	..	..	..	..	..	..	..	..	..	..	7.07	
Osage.....	Cedar.....	T.	T.	.17	..	.11	..	T.	.94	..	T.	.04	..	.06	..	T.	.30	..	T.	.15	..	..	..	..	..	..	..	..	5.81	
Oskaloosa.....	Des Moines.....	T.	T.	.02	1.77	T.	.18	..	.55	T.	.13	T.	..	..	..	T.	.60	..	T.	.20	..	..	..	..	..	..	..	..	6.22	
Ottumwa.....	do.....	23	T.	3.03	.02	T.	..	.70	..	T.	.06	T.	..	..	T.	.05	.04	T.	.18	..	..	..	..	..	..	..	..	6.94		
Pella.....	Raccoon.....	.66	.06	.70	..	..	..	..	..	..	.60	..	..	..	..	T.	.10	.14	..	..	..	..	..	..	..	..	..	3.19		
Perry.....	Des Moines.....	T.	..	.52	..	..	..	..	..	..	..	..	..	..	..	T.	.30	..	..	..	..	..	..	..	..	..	..	..	3.49	
Plover.....	do.....	..	..	.81	..	..	..	..	..	..	..	..	..	..	..	T.	.12	..	..	..	..	..	..	..	..	..	..	..	4.60	
Pocahontas.....	do.....	..	..	.14	..	.04	..	..	..	..	1.78	..	.07	1.13	..	T.	.06	..	..	..	..	..	..	..	..	..	..	..	13.73	
Ridgeway.....	Mississippi.....	T.	.05	.26	.47	.04	.04	..	..	..	5.25	..	.80	..	..	T.	.40	..	T.	.15	..	..	..	..	..	..	..	..	9.20	
Rockwell City.....	Raccoon.....	.10	.75	..	..	..	..	..	..	..	..	..	..	..	..	T.	.23	..	T.	.15	..	..	..	..	..	..	..	..	..	5.76
Sac City.....	do.....	..	..	.17	.61	.02	..	..	..	..	2.80	..	..	..	..	T.	.15	..	..	..	..	..	..	..	..	..	..	..	3.75	
St. Charles.....	Des Moines.....	.12	.02	..	.46	..	.02																								

TABLE 2.—*Daily precipitation for September, 1911. District No. 5—Continued.*

Stations.	Watershed.	Day of month.																													Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
<i>Illinois—Continued.</i>																																
Decatur |||	Illinois	T.	.35	.94	.43	...	.48	...	2.38	...	.36	.58	.02	.72	...	...	35	...	...	22	2.15	.52	1.29	1.21	...	T.	12.00					
Dixon |||	Mississippi	T.	.90	.05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.77	
Du Quoin	do	.68	1.53	1.59	...	.14	.07	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.26	
Dwight	Illinois	...	.38	.92	.03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.67	
East St. Louis |||	Mississippi	3.27	...	...	...	.05	...	...	.32	...	.15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.16	
Edwardsville	do	7.5	2.10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.71
Elgin	Illinois	...	.21	.45	.01	...	...	.03	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.66	
Galva |||	do	...	.16	1.47	.05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.29	
Grafton |||	Mississippi	1.20	...	.92	...	...	...	...	.12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.49
Greenville	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.66	
Griggsville	Illinois	41	.65	1.85	2.00	T.	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.77	
Havana	do	18	.21	1.40	.23	T.	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13.14	
Henry	do	...	.05	1.29	.09	...	...	1.00	.01	.59	.29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.19		
Hillsboro |||	Mississippi	1.05	...	1.04	...	...	...	...	.32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.46	
Joliet	Illinois	...	.07	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12.27	
Kishwaukee	Mississippi	T.	...	.50	.01	...	...	.07	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.48	
La Grange	Illinois	...	.16	T.	.65	T.	...	...	.06	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3.64	
La Harpe	do	0.7	.08	2.54	.19	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.84	
Lanark	Mississippi	0.8	T.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6.89	
La Salle	Illinois	0.4	0.63	1.87	.03	T.	...	...	1.55	.63	.01	.04	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14.31		
Lincoln	do	...	.65	1.00	.33	...	...	...	.86	...	T.	2.33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15.89		
Loami	do	...	.05	.60	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.66	
Manteno	do	...	.31	...	.88	.02	...	...	.23	...	...	.44	...	...	2.75	.25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Martinton |||	do	...	.30	.84	...	.04	...	...	.22	.13	...	.02	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.40	
Mascoutah	Mississippi	...	...	...	...	1.85	.34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.85	
Minonk	Illinois	T.	...	...	...	1.35	.08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10.13	
Monmouth	Mississippi	...	.67	.06	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5.57	
Morrison	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Morrisonville	Illinois	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8.99
Mount Vernon |||	Mississippi	1.58	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7.51
Oregon	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ottawa	Illinois	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pana	Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pearl City	Illinois	21	0.05	2.21	0.03	10	...	3.37	21	0.07	1.03	0.02	0.75	...	...	0.02	0.38	...	10	31	1.67	41	...	0.09	0.93	...	0.04	12.30				
Pontiac	Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Quincy	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Riley	Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Roberts	Illinois	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rockford |||	Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rushville	Illinois	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Charles	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Peter	Mississippi	1.95	...	1.05	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9.50
Sparta	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Springfield	Illinois	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Streator |||	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sullivan	Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sycamore	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tiskilwa	Illinois	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Walnut	Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Warsaw |||	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
White Hall	Illinois	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Windsor	Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Winnebago	do	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Yorkville	Illinois	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Zion	Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

‡ Precipitation for the 2

TABLE 3.—Maximum and minimum temperatures for September, 1911. District No. 5.

Date.	North Dakota.										Minnesota.										Winnibigoshish.							
	Bottineau. §§		Devils Lake.		Lisbon. §§		Minot. §§		Pembina. §§		Collegeville.		Crookston. §§		Grand Meadow.		Montevideo. §§		Moorhead.		New Ulm. §§		Pine River Dam.		St. Paul.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.				
1.....	78	55	82	53	92	51	78	51	80	56	82	59	80	56	92	57	89	56	87	58	93	58	80	45	86	62	78	51
2.....	73	43	68	47	81	49	71	45	80	47	80	57	68	52	80	62	78	56	72	48	80	60	69	51	75	57	77	54
3.....	74	44	74	44	80	35	80	46	76	38	75	48	73	43	80	44	76	44	76	41	76	47	72	34	75	50	72	40
4.....	60	49	58	52	65	53	57	53	70	48	71	58	61	56	84	55	77	59	62	57	81	54	64	43	68	55	67	48
5.....	69	45	58	47	69	54	59	47	62	46	64	56	66	55	66	57	65	57	68	48	65	57	63	53	66	54	68	54
6.....	49	43	48	43	54	47	47	43	54	40	58	42	50	45	59	51	57	50	50	42	56	52	57	39	55	46	59	40
7.....	60	39	56	33	54	40	56	37	66	34	50	44	55	42	64	44	49	41	55	41	52	45	49	39	52	42	51	39
8.....	63	40	60	44	63	42	65	44	65	36	57	45	57	45	70	50	69	43	58	48	64	45	59	43	61	51	55	44
9.....	71	39	73	50	63	47	75	45	76	46	71	49	73	47	74	46	77	48	79	49	76	49	70	49	74	51	74	47
10....	74	36	75	42	85	47	78	38	80	30	78	57	74	47	81	50	82	56	80	49	82	55	79	52	78	59	78	44
11....	62	39	60	43	78	56	62	45	58	46	75	60	65	57	84	68	72	43	83	66	78	54	82	58	71	52		
12....	75	39	68	40	65	37	78	43	65	31	74	42	64	35	72	49	70	46	66	37	75	49	63	30	63	46	62	33
13....	72	40	72	46	79	42	72	45	73	36	70	45	73	40	73	51	77	46	77	44	74	50	71	42	69	49	71	45
14....	68	50	73	59	77	46	75	48	70	38	73	54	73	50	85	59	80	52	77	58	72	54	75	59	72	53		
15....	75	43	77	51	86	45	82	51	78	42	81	53	78	50	79	50	87	54	83	52	82	51	77	52	81	55	80	56
16....	72	42	72	50	86	42	77	44	76	48	86	55	80	49	83	54	93	49	86	48	86	54	76	40	88	56	81	47
17....	55	43	62	46	84	50	59	45	60	46	82	60	75	50	84	59	72	52	76	45	69	57	82	50	75	58	77	60
18....	52	43	56	42	64	44	55	46	58	46	70	46	61	45	68	46	69	43	62	44	65	47	72	45	66	49	71	47
19....	68	30	66	37	77	34	70	35	70	36	66	44	67	38	68	41	67	38	70	38	71	41	66	43	68	46	68	46
20....	68	31	68	48	65	36	68	35	67	37	66	48	65	45	62	42	65	43	64	45	73	36	66	47	64	42		
21....	71	32	75	45	79	46	77	39	72	38	65	49	71	45	68	44	78	45	75	46	74	49	78	46	69	50	67	48
22....	52	34	59	40	77	43	53	39	60	33	80	54	67	43	76	50	82	54	74	48	81	51	71	48	80	53	71	51
23....	50	35	50	37	59	41	47	36	52	40	75	47	51	43	73	55	63	53	54	37	64	57	62	40	69	46	67	42
24....	54	32	52	34	54	34	57	36	55	25	48	41	49	32	61	46	48	43	49	34	47	46	47	39	50	45	44	36
25....	54	30	54	36	56	30	58	31	55	32	57	41	50	35	61	44	67	43	55	34	62	45	52	34	60	43	52	36
26....	68	31	69	37	66	29	75	36	62	31	60	41	62	31	65	36	68	40	65	34	64	40	63	27	61	39	60	33
27....	49	34	49	33	69	39	55	34	50	32	61	50	50	36	73	54	70	45	56	40	71	41	68	46	66	51	57	43
28....	49	34	46	36	70	40	60	37	42	31	56	41	47	33	56	49	53	44	60	39	59	49	50	37	51	43	46	34
29....	66	33	64	34	60	30	70	36	58	37	57	41	60	40	50	38	57	39	60	41	54	37	58	44	54	37	53	
30....	68	33	63	46	60	34	72	39	62	36	55	41	60	40	50	38	54	49	57	42	54	42	54	39	51	40	51	33
Mns.	64.0	38.7	63.6	43.2	70.6	42.1	66.3	41.6	65.1	38.9	68.1	43.9	63.9	44.3	71.7	49.5	71.2	48.5	67.4	44.4	70.1	49.9	66.4	42.9	67.9	50.1	65.5	44.5

Date.	Wisconsin.										Iowa.										Des Moines.		Dubuque.		Keokuk.			
	Delavan.		Eau Claire.		La Crosse.		Madison.		Mauston.		Spooner.		Wausau.		Algona.		Cedar Rapids. §§		Charles City.		Davenport.		Des Moines.		Dubuque.		Keokuk.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1.....	88	52	85	58	88	55	88	60	85	51	84	56	97	63	92	55	92	54	95	61	97	57	88	56	94	66		
2.....	88	57	81	62	79	55	78	63	75	50	78	54	83	60	86	64	83	55	79	57	89	57	83	60	94	69		
3.....	78	46	76	46	79	50	77	55	75	45	74	61	81	48	81	56	78	49	78	59	81	62	76	54	85	66		
4.....	81	52	77	55	84	57	81	55	78	48	73	43	89	51	87	56	84	51	87	57	89	61	82	56	87	62		
5.....	82	64	73	58	74	58	81	58	78	62	74	56	86	57	86	57	87	62	87	62	83	62	85	66	86	66		
6.....	71	58	61	48	64	55	65	56	63	53	63	46	83	46	64	55	73	60	62	57	76	60	82	56	86	60		
7.....	68	57	55	43	55	46	63	55	57	46	58	40	64	40	62	48	64	60	59	52	70	60	64	54	62	62		
8.....	65	56	63	50	62	50	64	53	60	50	65	48	65	48	64	50	68	56	68	52	67	56	75	52	70	59		
9.....	77	56	74	50	72	47	72	56	72	50	68	53	76	51	79	57	72	50	80	61	78	61	71	59	78	62		
10....	76	61	80	56	83	61	77	62																				

TABLE 3.—*Maximum and minimum temperatures for September, 1911. District No. 5—Continued.*

Date.	Hannibal, Mo.		Laporte, Ind.		Illinois.																	
					Cairo.		Greenville.		La Salle.		Monmouth.		Mount Vernon. §§		Peoria.		Springfield.		Winnebago.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	93	64	91	.....	86	64	89	63	92	60	95	55	89	57	95	56	90	64	93	54		
2.....	94	66	88	62	86	67	92	63	91	64	95	63	89	60	95	62	92	65	86	68		
3.....	87	64	79	.....	90	68	88	68	77	57	86	60	88	65	83	62	83	62	80	54		
4.....	85	65	.....	.....	88	68	87	65	85	55	90	58	90	63	90	60	86	63	85	53		
5.....	86	66	.....	.....	84	69	78	66	84	64	85	64	87	68	85	64	81	67	84	52		
6.....	90	64	.....	.....	91	69	87	66	74	59	87	56	92	70	84	57	84	63	70	57		
7.....	72	65	75	60	87	65	83	64	76	63	72	62	86	64	75	62	78	64	69	59		
8.....	74	62	74	55	87	72	81	68	75	61	76	59	85	65	73	62	72	64	66	55		
9.....	82	66	75	56	84	71	82	64	81	63	79	62	85	68	80	63	78	62	79	60		
10.....	76	65	76	55	88	72	81	71	75	66	82	62	85	68	77	64	76	68	82	60		
11.....	87	63	84	58	86	71	83	66	82	62	85	62	82	66	82	63	83	66	84	61		
12.....	87	72	74	52	92	68	88	69	70	59	81	65	93	68	78	60	82	66	69	57		
13.....	82	63	74	50	88	70	80	61	72	56	70	57	90	64	72	51	69	58	73	50		
14.....	95	69	75	50	92	74	92	67	90	59	93	57	95	63	93	65	92	66	90	55		
15.....	83	66	76	51	93	77	86	71	79	65	78	64	92	73	78	60	80	64	78	50		
16.....	76	66	.....	.....	84	71	76	69	84	58	83	53	85	70	83	54	79	65	85	48		
17.....	87	69	83	53	88	71	80	70	84	64	84	53	84	69	80	67	79	70	82	56		
18.....	79	62	82	60	93	72	86	70	77	60	79	54	94	71	76	60	78	65	75	60		
19.....	70	53	67	55	75	64	74	59	70	52	73	48	76	54	71	51	71	56	71	47		
20.....	68	53	70	49	80	59	75	53	69	50	67	48	78	53	72	49	72	54	71	48		
21.....	72	54	66	45	75	62	68	60	69	57	71	55	69	54	70	50	70	56	67	53		
22.....	75	49	.....	.....	74	53	76	55	75	49	77	49	76	53	77	46	74	53	77	46		
23.....	80	55	.....	.....	81	59	78	56	77	54	80	51	81	53	78	50	78	53	77	49		
24.....	81	65	.....	.....	86	62	85	62	71	60	70	64	88	55	69	62	73	63	67	55		
25.....	68	59	77	45	88	69	73	65	62	56	65	53	73	64	65	57	73	61	66	41		
26.....	69	58	65	46	84	68	70	60	66	53	70	53	71	60	71	53	70	58	70	50		
27.....	90	68	77	55	91	69	86	64	82	66	84	53	87	63	84	65	87	66	79	55		
28.....	83	67	63	50	91	72	78	67	72	57	74	63	84	66	73	60	76	67	77	60		
29.....	76	59	69	53	84	66	76	62	70	49	74	53	79	68	73	49	74	57	68	49		
30.....	72	55	67	40	78	62	69	55	59	43	61	44	78	56	62	43	66	51	58	39		
Mns.....	80.6	62.4	75.1*	52.5†	85.8	67.6	80.9	64.0	76.3	58.0	78.9	56.7	84.4	63.0	78.1	57.6	78.2	61.9	75.9	53.4		

*, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record.

§ Data are from standard instruments not supplied by the U. S. Weather Bureau.

§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.